# Acceptance of YouTube for Islamic Information Acquisition: A Multi-group Analysis of Students'Academic Discipline

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Abstract—YouTube has been recognized as an important information source for the millennial generation. This paper aims to identify the factors affecting Malaysian higher education students' acceptance of YouTube for Islamic information acquisition and to investigate if any notable distinction that exists between the students' path coefficients in Islamic academic discipline and the other disciplines. Employing the Unified Theory of Acceptance and Use of Technology model (UTAUT) as its theoretical foundation, data were collected by distributing a self-administered survey to 795 students actively using YouTube for information seeking. Partial least squares structural equation modelling (PLS-SEM) and multi-group analysis (MGA) in SmartPLS 3.2.7 software were used to analyze the data. Three constructs of the UTAUT model, performance expectancy, effort expectancy and social influences, were found to significantly and positively influence behavioural intention to use YouTube for Islamic information acquisition in both groups of students. Facilitating conditions demonstrates significantly negative relationship with YouTube acceptance for students in other academic disciplines than for Islamic academic discipline. Additionally, the MGA analysis' findings suggest that determinants' factor coefficients of YouTube acceptance for Islamic information acquisition are not significantly different between students in Islamic academic disciplines and the other disciplines. This study validates the UTAUT model to understand the determinant of social media application usage in a new study context.

Keywords—Unified Theory of Acceptance and Use of Technology (UTAUT); YouTube; information acquisition; student knowledge; Partial Least Square

### I. INTRODUCTION

YouTube resembles a social media platform that specializes in online videos. It is available in over 100 countries, with 400 hours of video added per minute in 80 languages [1]. With 2.3 billion users worldwide, the YouTube site has increased in popularity [2]. However, with no requirements or defined certification criteria, creators M. F Mustaffa<sup>3</sup>

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worldwide can submit an infinite number of videos to YouTube, meaning that video accuracy and quality might differ widely [3, 4]. This is because the content quality and content validity would depend on the knowledge and experience of video creators [5]. However, despite these facts, YouTube has been recognized as the first and essential source for millennial generations when they want to acquire new information and express their opinion [6-8]. Remarkably, the most popular search-related term on YouTube is "How to" [9].

There is an expanding literature body that has investigated YouTube as an information source predominantly pertaining to health-related information [10-13]. The findings of these studies, together with others, have highlighted the quality and reliability of shared health information. For example, Kocyigit et al. [13] and Ng et al. [11] found that most YouTube videos were high quality and provided useful information. However, several studies indicated that YouTube is not an appropriate source of information [10, 12]. Nevertheless, despite the fact of contrary evidence regarding specialized health information, the number of users obtaining health information from internetbased sources is rapidly increasing [13]. One explanation is that users have experienced enjoyable and valuable times when YouTube is used as a source of health information [14]. Nevertheless, studies on the usage of YouTube for Islamic information are scarcely found in the literature.

Traditionally, Islamic knowledge learning is usually performed through face-to-face interactions known as talaqqi and takes place in mosques, madrasahs, or other specific places [15, 16]. However, researchers have long been concerned about digital religious learning [17], which has motivated the present study. In general, as observed from prior studies, several studies highlighted the motivations of online Islamic information. For instance, Ishak [18] found that social media are uncomplicated and beneficial for Malaysian Muslims to obtain Islamic information to increase their religious beliefs. This is consistent with a recent study of Islamic informationseeking behavior in Saudi Arabia [19] and Indonesia [20]. However, most studies were conducted on general Internet or social media applications, and a specific study for YouTube has not been attempted.

The literature shows that UTAUT researching students' YouTube usage is being validated to describe and anticipate user behaviors behavioral and intention with regard to technology acceptance [21]–[26]. In contrast, Venkatesh et al. [28] proposed that it is crucial to evaluate UTAUT in a variety of technological contexts, settings, and cultural contexts since factors that affect technology adoption may differ depending on the technological context, cultural context, and user population. In this context, it was projected that the variables affecting students' use of YouTube for information acquisition could vary from contexts for using information systems generally, and that the UTAUT would need to be applied in diverse situations [26].

The objective of this study is twofold. First, to investigate the determinants of YouTube acceptance for Islamic information acquisition among Muslim university students in the margin of UTAUT. In order to fully grasp students' acceptance of YouTube, the four basic UTAUT constructs (performance expectancy, effort expectancy, social influence, and facilitating conditions) were utilized. Second, despite the numerous studies on YouTube adoption within various academic disciplines in Higher Education, such as medical sciences [29, 30], language literacy [31, 32], and business management [33, 34], the objective of our work is to fill the gap of the effect of academic disciplines on YouTube Islamic information acquisition.

This paper's remaining section is like the following. As Section II describes the hypotheses development and conceptual framework, Section III explains the methodology for this study. Section IV discusses the results of the measurement model, structural model and multi-group analysis. Furthermore, Section V presents the study's findings, and Section VI provides the paper's conclusion.

## II. LITERATURE REVIEW

### A. Conceptual Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT) model was chosen as the theoretical guideline for this research because it explains the elements that influence technology acceptance and usage [27]. Furthermore, several prior YouTube studies' usage in educational settings has empirically validated UTAUT for validity and reliability [23], [35–37]. Furthermore, UTAUT is a robust approach because it incorporates eight various models [27], encompassing the Theory of Reasoned Action [38, 39], Theory of Planned Behavior [40], Technology Acceptance Model [41]. motivational model [42], the personal computer utilization model [43], an integrated model of planned behavior and technology acceptance [44], Social Cognitive Theory [45] as well as Innovation Diffusion Theory [46]. Moreover, facilitating conditions, social influence, effort expectancy, and performance expectancy are the four key variables that impact actual use and behavioral intention [27]. Therefore, three independent variables (social influence, effort expectancy, and performance expectancy) are suggested as behavioral intention direct determinants by UTAUT, whereas behavioral intention and facilitating condition determine actual usage. Hence, we suggest the conceptual framework provided in Fig. 1 for this research.

## B. Hypotheses Development

Performance expectancy denotes a person's belief that technology will improve their performance in specific tasks [27]. Performance expectancy will be explored in connection to information acquisition activities in this research. The performance expectancy factor has been proven to possess a major effect on the behavioral intention of social media usage in education [23][47-50]. Thus, the research theorizes that the higher students perceive YouTube as an advantageous source of Islamic information acquisition, the higher their behavioral intention to use the application.

H1. Performance expectancy is a significant predictor of the behavioral intention to use YouTube for Islamic information acquisition.

The level of easiness connected with the technology used is referred to as effort expectancy [27]. Effort expectancy signifies a person's expectation of obtaining Islamic information from YouTube without much effort, as YouTube is a social media application. Researchers have found that the easiness of social media in educational settings positively influences the behavioral intentions to utilize the applications [47-49]. Hence, this research hypothesizes that the students' intention to utilize a YouTube video for Islamic information acquisition will increase with an advance in the searching easiness and handling of the YouTube functions.

H2. Effort expectancy is a significant predictor of the behavioral intention to use YouTube for Islamic information acquisition.

Social influence refers to a person's understanding of how others are relevant (e.g., peers, friends) and considers them utilizing technology [27]. Several research on social media acceptance has found that the influence of others is a strong predictor of social media behavioral intention for learning purposes [23][47-50].



Fig. 1. The Research Framework and Hypotheses.

Therefore, individuals will be motivated to accept social media in educational settings if social influencers also utilize it. Hence, this work hypothesizes that the students' intentions to use YouTube for Islamic information acquisition increase when the social influence level increases (for instance, imposed by significant people, family, or peers).

H3. Social influence is a significant predictor of the behavioral intention to use YouTube for Islamic information acquisition.

The extent to which a person senses that technological infrastructure and an organizational sustains to ease the system's use is termed facilitating conditions [27]. Facilitating conditions were expressed in the context of this research as students' views of whether they have access to the tools and assistance they need to utilize YouTube for Islamic information acquisition. Several social media researchers have found that the facilitating conditions are a reliable predictor of intention to utilize social media apps [47][50]. Therefore, this research hypothesizes that when the ease of facilitating conditions improves, the student's use of YouTube videos for Islamic knowledge will develop.

H4: Facilitating conditions are a significant predictor of the behavioral intention to use YouTube for Islamic information acquisition.

Behavioral intention signifies the motivational factors that affect the probability of performing certain behavior [40]. The behavioral intention has been identified as a mediating element in users' use and acceptance of technology [27]. In the framework of this research, behavioral intention assesses students' inclinations, as well as intentions of using YouTube to get Islamic information. According to the UTAUT, behavioral intention is a powerful indicator of actual technology utilization. The behavioral intention has also been found to be a key predictor of social media application usage in several research on social media [23][47, 48][50]. Therefore, this study hypothesizes that behavioral intention is pivotal to YouTube's actual use of Islamic information.

H5: Behavioral intention is a significant predictor of students' actual usage of YouTube for Islamic information acquisition.

## III. METHODS

## A. Samples

Referring to the UTAUT by Venkatesh et al. [27], this research adopts a quantitative method to assess all the variables in the study hypothesis model. The participants in the research are the younger generation of Muslims in Malaysia among undergraduate students at public universities aged between 20 to 30 years. The rationale for selecting university students is because they are active users of YouTube and utilize the platform for information seeking.

As per the Ministry of Higher Education Malaysia's report, there were 584,576 public university students in 2020 [51]. The sample size was selected according to the method prescribed for Partial Least Squares-Structural Equation Modelling (PLS-SEM) analysis. Based on the minimum sample size requirement suggested by Hair et al. [52], we would need a minimum 619 sample size to render the corresponding effect significant at 5% when the minimum path coefficient is expected to be signed between 0.11 and 0.20. This study targeted 800 students randomly selected from five areas in Malaysia at six public universities. Data were collected through online surveys assisted by the program coordinator in each selected university. Initially, 800 surveys were collected; 795 students were used for the analysis after removing the outliers.

## B. Measures

The questionnaire consists of demographics, YouTube usage patterns, and five variables taken from UTAUT and administered in the Malay language. The measurement instrument is presented in Appendix A. The interval scale was used to six variables measure: performance expectancy (Cronbach's Alpha=0.886), effort expectancy (Cronbach's Alpha=0.935), social influence (Cronbach's Alpha=0.917), facilitating conditions (Cronbach's Alpha=0.926), as well as actual usage (Cronbach's Alpha=0.909). In the pre-test research, they all had high construct reliability.

## C. Data Analysis

The partial least squares structural equation modelling (PLS-SEM) was used for this investigation due to its ideal for theory prediction and exploration [53]. SmartPLS version 3.2.7 [54] was used. The following actions were taken during data analysis: to see if any demographic variables differed between Islamic and other academic disciplines, a chi-squared test was utilized alongside IBM SPSS 26.0. The model was subsequently verified using a two-stage analytical PLS-SEM procedure [55]. PLS-SEM has the additional benefit of evaluating both the measurement and structural models, which is additionally best suited to performing multi-group analysis [54][57].

The first stage involves testing the measurement model to assess the internal consistency reliability, convergent validity and discriminant validity of the constructs used in this study. Composite reliability of more than 0.70 [55] was used to analyze the reliability. Compared to Cronbach's Alpha, composite reliability is better suited for PLS-SEM [53]. In addition, the average variance extracted, and factor loading was utilized to evaluate convergent validity. Meanwhile, the Heterotrait-Monotrait ratio (HTMT) and the Fornell-Larcker criterion were used to determine discriminant validity [56]. Finally, an invariance test was also carried out to identify if the construct measurements were equally comprehended all across two groups of different academic disciplines before performing a multi-group analysis (MGA).

The second stage involves examining the structural model to test the hypotheses. The structural model defined the casual relationships between the model's constructs (the coefficient of determination,  $R^2$  value and path coefficients). The  $R^2$  and the path coefficients (significance and beta) together demonstrate how well the data are consistent with the proposed model [55][57]. The bootstrapping method involving a resampling of 5000 was employed to calculate the path coefficient's significance. According to the literature, this study additionally evaluated the path model's predictive relevance ( $Q^2$  value), which includes blindfolding procedure [55][57]. Additionally, effect sizes  $(f^2)$  were evaluated to identify if an exogenous latent construct has a weak, moderate, or substantial influence on an endogenous latent construct [52]. Lastly, the multi-group analysis is carried out to establish the differences in path coefficients between two groups.

## IV. RESULTS

#### A. Sample Profiles

The chi-squared test discovered substantial differences (p<0.05) between students in Islamic academic discipline and other academic disciplines in gender, university, year of study, and age (Table I). Questions with multiple-choice answers were used to examine YouTube search behavior is shown in Table II.

TABLE I.SAMPLE PROFILES

Variables	Profiles	Full Dataset n (%)	Islamic Academic Discipline Dataset n (%)	Other Academic Disciplines Dataset n (%)	Chi- Square	p Value	
Condor	Male	317 (39.9)	97 (30.6)	220 (69.4)	19 257	0.000	
Gender	Female	478 (60.1)	202 (42.3)	276 (57.7)	18.337	0.000	
	USIM	200 (25.1)	99 (49.5)	101 (50.5)			
	UMK	100 (12.6)	0 (0.0)	100 (100.0)			
<b>TT · ·</b> ,	UMS	100 (12.6)	0 (0.0)	100 (100.0)	200 500	0.000	
University	UKM	100 (12.6)	100 (100.0)	0 (0.0)	300.509		
	UNIMAP	100 (12.6)	0 (0.00)	100 (100.0)			
	UIA	195 (24.5)	100 (51.3)	95 (48.7)			
	Year 1	167 (21.0)	70 (41.9)	97 (58.1)			
Study	Year 2	204 (25.7)	53 (26.0)	151 (74.0)	21.012		
Year	Year 3	291 (36.6)	107 (36.8)	184 (63.2)	21.813	0.000	
	Year 4	133 (16.7)	69 (51.9)	64 (48.1)			
	18 to 21	517 (53.0)	124 (24.0)	393 (76.0)			
	22 to 24	402 (41.2)	161 (40.0)	241 (60.0)	20.025	0.001	
Age	25 to 27	48 (4.92)	13 (27.0)	35 (73.0)	38.935	0.001	
	28 to 30	8 (0.82)	1 (12.5)	7 (87.5)			

Almost all students actively used YouTube to get religious information based on self-initiative (94.0%). Searching keywords are based on topics (54.6%), current issues (51.2%), religious figures (45.9%), and religious law (33.0%). Students actively search YouTube on campus (77.6%), at home

(58.3%), and others (10.8%) using smartphones (79.2%), notebooks (46.4%), and tablet (12.3%).

#### B. Measurement Invariance Test

A measurement invariance test assesses if item measurements vary between groups [55].

Variables	Full Dataset n (%)	Islamic Academic Discipline Dataset n (%)	Other Academic Disciplines Dataset n (%)
Using YouTube for religious information on own initiatives:	748 (94.0)	290 (38.8)	458 (61.2)
Keywords used for searching religious information:			
Topics	434 (54.6)	175 (40.3)	259 (59.7)
Current Issues	407 (51.2)	163 (40.0)	245 (60.0)
Religious Figures	365 (45.9)	141 (38.6)	224 (61.4)
Religious Law	262 (33.0)	108 (41.2)	154 (58.8)
Access YouTube from:			
Campus Network	617 (77.6)	261 (42.3)	356 (57.7)
Home	464 (58.3)	163 (35.1)	301 (64.9)
Others	86 (10.8)	30 (34.9)	56 (65.1)
Device Accessing YouTube:			
Smartphone	630 (79.2)	247 (39.2)	383 (60.8)
Notebook	369 (46.4)	156 (42.3)	213 (57.7)
Tablet	98 (12.3)	32 (32.7)	66 (67.3)

When executing multi-group analysis, this is a key step [58]. The initial examination found that full measurement invariance was not possible. We discovered that one indicator of effort expectancy (EE2) has distinct implications across the groups and excluded this indication. All construct measures were invariant between Islamic academic discipline and other academic disciplines dataset once the initial model was purified; there was no substantial distinction between those two. The findings of the investigation revealed well-developed measurement invariance (Table III).

### C. Measurement Model

Assessment of the measurement model was done through construct reliability as well as validity.

For construct reliability, this study tested the individual composite reliability (CR) values to evaluate the reliability of each of the measurement model's key variables [55]. The results indicate that all the composite reliability (CR) values range from 0.799 to 0.894 in the full data set, 0.773 to 0.94 in the Islamic discipline group, and 0.827 to 0.938 in the other disciplines group, respectively. These values were higher than 0.7 [39], which, as demonstrated in Table IV, sufficiently demonstrates that construct reliability is met.

Construct	Indicator	Outer Loadings Differences	p Value
	PE1	0.023	0.372
	PE2	0.023	0.225
Performance Expectancy (PE)	PE3	0.245	0.669
	PE4	0.285	0.636
	PE5	0.001	0.969
	EE1	0.128	0.619
Effort Expositorov (EE)	EE3	0.049	0.847
Enort Expectancy (EE)	EE4	0.216	0.917
	EE5	0.209	0.178
	SI1	0.185	0.537
Social Influence (SI)	SI2	0.189	0.677
Social influence (SI)	SI3	0.200	0.287
	SI4	0.281	0.148
	FC1	0.056	0.403
	FC2	0.101	0.875
Facilitating Conditions (FC)	FC3	0.021	0.735
	FC4	0.111	0.813
	FC5	0.042	0.739
	BI1	0.006	0.685
Pahavioral Intention (PI)	BI2	0.025	0.221
	BI3	0.005	0.692
	BI4	0.024	0.538
Actual Usage (AU)	AU	0.000	0.671

TABLE III. MEASUREMENT INVARIANCE TEST

Indicator reliability was examined using factor loading. High loadings on a construct show that the related indicators appear to have similarities which what the construct captures [55]. Factor loadings of 0.50 were regarded as highly significant [55]. As indicated in Table IV, all items' loadings were higher than the recommended value of 0.5, with the exception of item FC2 in three different data sets and SI4 in the Islamic academic discipline group. These items were retained because they not affect internal consistency and reliability [52]. However, items EE1 and FC4 were deleted to improve the composite reliability.

This study employed the average variance extracted (AVE) to examine convergent validity (the degree to which a measure correlates favourably with different measures of the same concept), and it found that all AVE values exceeded the recommended value of 0.50 [55]. As a result, the convergent validity for all constructs in the three datasets has been well met. Thus, sufficient convergent validity is exhibited, as shown in Table IV. The full dataset indicates values of AVE from 0.551 to 0.793, Islamic academic discipline data pointed the values ranging from 0.540 to 0.797, and other academic disciplines data indicated the values of AVE from 0.556 to 0.791.

Two metrics, Fornell-Larcker and the Heterotrait-Monotrait (HTMT) ratio, were used to evaluate the discriminant validity of the measurement model (the extent to which items differ between constructs or measure various concepts). The results of discriminant validity using the Fornell-Larcker criterion for the full dataset are presented in Table V, in which the square root of the AVEs on the diagonals, as denoted by the bolded values, are higher than the correlations between constructs (column values and corresponding row). This suggests that the constructs have an excellent discriminant validity because they are substantially associated to their respective indicators when compared to other model constructs [59]. Moreover, the correlation between exogenous constructs is lower than 0.85 [59]. Additionally, the constructs' Fornell-Larcker criterion for the Islamic academic discipline dataset (Table VI) and other academic disciplines dataset (Table VII) also suggested good discriminant validity.

		Factor Loadings			Compo	site Reliability (CR)		Average Variance Extracted (AVE)			
Construc t	Indicato r	Full Datase t	Islamic AcademicDisciplin e Dataset	Other Academic DisciplinesDatas et	Full Datase t	Islamic AcademicDisciplin e Dataset	Other Academic DisciplinesDa taset	Full Dataset	Islamic Academic Discipline Dataset	Other Academic DisciplinesDatas et	
	PE1	0.854	0.869	0.846							
	PE2	0.889	0.906	0.883							
PE	PE3	0.744	0.909	0.664	0.894	0.940	0.873	0.630	0.758	0.586	
-	PE4	0.626	0.834	0.549							
	PE5	0.828	0.829	0.831							
	EE3	0.705	0.549	0.884		0.773			0.540		
EE	EE4	0.731	0.890	0.648	0.799		0.861	0.571		0.677	
	EE5	0.825	0.726	0.911							
	SI1	0.792	0.927	0.742							
C1	SI2	0.801	0.719	0.907	0 0 20	0.955	0.862	0.551	0.612	0 611	
51	SI3	0.798	0.933	0.733	0.020	0.033	0.862		0.612	0.011	
	SI4	0.546	0.449	0.730	]						

TABLE IV. CONVERGENT VALIDITY AND RELIABILITY

	FC1	0.854	0.882	0.826						0.550
EC	FC2	0.440	0.377	0.476	0.002	0.828	0.827	0.563	0.564	
гC	FC3	0.878	0.858	0.881	0.882			0.303		0.550
	FC5	0.747	0.776	0.733						
	BI1	0.897	0.901	0.895	0.020	0.940	0.938	0.793	0.797	0.791
DI	BI2	0.905	0.920	0.895						
Ы	BI3	0.928	0.931	0.926	0.850					
]	BI4	0.829	0.815	0.839						
AU	B2	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE V. DISCRIMINANT VALIDITY OF THE FULL DATASET

Fornell	Fornell-Larcker Criterion							Heterotrait-Monotrait Ratio (HTMT)						
	AU	BI	EE	FC	PE	SI	AU BI EE FC					PE	SI	
AU	1.000						AU							
BI	-0.098	0.890					BI	0.101						
EE	-0.062	0.576	0.756				EE	0.076	0.749					
FC	-0.117	0.550	0.411	0.750			FC	0.133	0.656	0.593				
PE	-0.081	0.655	0.638	0.448	0.794		PE	0.090	0.732	0.861	0.547			
SI	-0.054	0.561	0.577	0.329	0.522	0.742	SI	0.061	0.683	0.849	0.452	0.660		

Notes: PE: performance expectancy; SI: social influence; EE: effort expectancy; FC: facilitating condition; AU: actual usage; BI: behavioral intention

TABLE VI. DISCRIMINANT VALIDITY OF ISLAMIC ACADEMIC DISCIPLINE DATA	ASET
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Fornell-	Larcker Cri	terion					Heterotrait-Monotrait Ratio (HTMT)						
	AU	BI	EE	FC	PE	SI		AU	BI	EE	FC	PE	SI
AU	1.000						AU						
BI	-0.138	0.893					BI	0.138					
EE	-0.062	0.629	0.735				EE	0.102	0.801				
FC	-0.117	0.609	0.535	0.751			FC	0.136	0.712	0.759			
PE	-0.081	0.686	0.647	0.531	0.870		PE	0.103	0.744	0.837	0.627		
0SI	-0.054	0.643	0.620	0.410	0.579	0.782	SI	0.061	0.732	0.894	0.514	0.655	

Notes: PE: performance expectancy; EE: effort expectancy; SI: social influence; FC: facilitating condition; BI: behavioral intention; AU: actual usage

TABLE VII. DISCRIMINANT VALIDITY OF OTHER ACADEMIC DISCIPLINES DATA	ASET
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Fornell-	Larcker Cri	terion					Heterotrait-Monotrait Ratio (HTMT)							
	AU	BI	EE	FC	PE	SI		AU	BI	EE	FC	PE	SI	
AU	1.000						AU							
BI	-0.074	0.893					BI	0.077						
EE	-0.090	0.629	0.735				EE	0.093	0.801					
FC	-0.111	0.609	0.535	0.751			FC	0.127	0.712	0.759				
PE	-0.079	0.686	0.647	0.531	0.870		PE	0.089	0.744	0.837	0.627			
SI	-0.076	0.643	0.620	0.410	0.579	0.782	SI	0.083	0.732	0.894	0.514	0.655		

Notes: PE: performance expectancy; EE: effort expectancy; SI: social influence; FC: facilitating condition; BI: behavioral intention; AU: actual usage.

However, Henseler et al. [56] mentioned that the lack of discriminant validity in most study scenarios is not accurately revealed by the Fornell-Larcker criterion. Therefore, a new approach has been introduced to solve this sensitivity problem, which uses the HTMT ratio of correlations based on the multitrait-multimethod matrix. The results for discriminant validity using the HTMT ratio are presented in Table V (full

dataset), Table VI (Islamic academic discipline dataset) and Table VII (other academic disciplines dataset).The conservative approach's HTMT threshold is <0.85, whereas for the liberal approach's threshold is <0.90 [38]. The liberal approach was used in the current study to evaluate discriminant validity. The findings demonstrate a lack of discriminant validity since all construct values in the three datasets are less than 0.90. In conclusion, based on the tests of both validity and reliability, the measurement model in three datasets has been validated successfully.

## D. Structural Model

The structural model defined the causal relationships between the constructs in the model (the coefficient of determination,  $R^2$  value and path coefficients). Both the path coefficients (significance and  $\beta$ ) and the  $R^2$  display excellent ways that the data is supporting the hypothesized model [55][57]. Table VIII presents the path coefficients for the entire sample. After analysis, it was discovered that behavioural intention (BI) was positively and significantly associated to effort expectancy (EE), performance expectancy (PE), and social influence (SI) for all datasets. Table VIII also displays the results in detail for each academic discipline. Most notably, both the academic disciplines datasets and the entire datasets offer empirical support for H1, H2, and H3, respectively.

With regard to the relationship between facilitating condition (FC) and actual usage (AU), the full and other academic disciplines datasets were discovered to possess a negative significant outcome. Thus, H4 is strongly supported, except for the dataset for Islamic academic discipline. The  $R^2$  values in Table IX for this relationship were above the desired 0.5 threshold and considered moderate [55], accounting for 51% of behavioural intention (BI) variance. However, there is

no empirical support for the impact of behavioural intention (BI) on actual usage (AU) for all datasets.

This study also evaluated the path model's predictive relevance ( $Q^2$  value) via the blindfolding procedure. Every data point of the indicators in the reflective measurement model of endogenous constructs is systematically deleted and predicted during the blindfolding procedure, which is a resampling technique [55]. The original values and the forecasted values are compared using this procedure. The path model has good predictive accuracy if the prediction is close to the original values (for example, the prediction error is minimal). If the value of  $Q^2$  is greater than 0, then the predictive relevance of the proposed model exists for a certain endogenous construct [55], [59]. The findings for all datasets reveal that the  $Q^2$  values are all greater than 0, verifying the prediction model as shown in Table IX.

Finally, this study assessed the  $f^2$  effect sizes. It identifies if an exogenous latent construct possess a weak, moderate, or substantial impact on an endogenous latent construct [51]. Hair et al. [55] suggest testing the  $R^2$  value's changes. On the other hand, Cohen [61] recommend a magnitude of  $f^2$  at 0.35 (large effects), 0.15 (medium effects) and 0.02 (small effects) as a guideline measure. Following the rules of thumb, the result of  $f^2$  as Table IX shows the relationships with large effects on behavioural intention (BI) of the total dataset but small effect sizes on actual usage (AU).

TABLE VIII. STRUCTURAL ESTIMATES

	Full Dataset			Islamic Acad	lemic Disciplir	ne Dataset	Other Academic Disciplines Dataset			
Hypotheses	Path Coefficients (β)	p Value	Results	Path Coefficients (β)	p Value	Results	Path Coefficients (β)	p Value	Results	
H1: $PE \rightarrow BI$	0.402	0.000	S	0.373	0.000	S	0.305	0.000	S	
H2: $EE \rightarrow BI$	0.194	0.000	S	0.208	0.001	S	0.291	0.000	S	
H3: SI $\rightarrow$ BI	0.239	0.000	S	0.298	0.000	S	0.225	0.000	S	
H4: FC $\rightarrow$ AU	-0.090	0.019	S	-0.072	0.293	NS	-0.100	0.027	S	
H5: BI $\rightarrow$ AU	-0.048	0.250	NS	-0.095	0.169	NS	-0.023	0.658	NS	

Notes: S: supported; NS: not supported; PE: performance expectancy; EE: effort expectancy; SI: social influence; FC: facilitating condition; BI: behavioral intention; AU: actual usage

TABLE IX. RESULTS OF  $R^2$ ,  $Q^2$ , AND  $F^2$  ANALYSIS

Construct	Full Dataset				Islamic Academic Discipline Dataset				Other Academic Disciplines Dataset			
	$R^2$	$Q^2$	$f^2$		$R^2$	$Q^2$	$f^2$		<b>R</b> <sup>2</sup>	$Q^2$	$f^2$	
			AU	BI			AU	BI			AU	BI
EE	-	-		0.038	-	-		0.048	-	-		0.071
FC	-	-	0.006		-	-	0.003		-	-	0.008	
PE	-	-		0.177	-	-		0.167	-	-		0.084
SI	-	-		0.075	-	-		0.120	-	-		0.065
BI	0.513	0.401	0.002		0.582	0.456	0.006		0.512	0.396	0.000	
AU	0.015	0.011			0.022	0.008			0.013	0.006		

Notes: PE: performance expectancy; SI: social influence; EE: effort expectancy; FC: facilitating condition; BI: behavioral intention; AU: actual usage

## E. Multi-group Analysis (MGA)

Using MGA, the analysis concludes by determining if the differences in path coefficients between the Islamic academic discipline dataset and other academic disciplines dataset are significant. The results in Table X indicate no substantial differences between the two groups were observed in any pathways. This indicates that there is no significant difference between the two different groups of academic disciplines in terms of the effect of performance expectancy (PE), effort expectancy (EE), and social influence (SI) on behavioural intention (BI) to use YouTube for Islamic information acquisition. This study also indicates that there is no significant difference between two different groups of academic disciplines in terms of the effect of facilitating condition (FC) and behavioural intention (BI) on the actual usage (AU) of YouTube for Islamic information acquisition.

### V. DISCUSSION

This study used the UTAUT model as a guiding concept to analyze the factors that influence students' behavioral intentions to utilize YouTube for Islamic information acquisition.

TABLE X. PATH DIFFERENCES BY ACADEMIC DISCIPLINES

Relationships	Path Coefficients Differences	t Value	p Value
$PE \rightarrow BI$	0.100	1.199	0.231
$\text{EE} \rightarrow \text{BI}$	0.117	1.316	0.189
$\mathrm{SI} \to \mathrm{BI}$	0.077	1.030	0.303
$FC \rightarrow AU$	0.027	0.336	0.737
$\mathrm{BI} \to \mathrm{AU}$	0.071	0.852	0.394

Notes: PE: performance expectancy; SI: social influence; EE: effort expectancy; FC: facilitating condition; BI: behavioral intention; AU: actual usage.

It also looked at how academic disciplines affected these relationships. The PLS-SEM approach's empirical outcomes showed that the relevance and relative significance of influencing elements in the UTAUT on behavioral intention and usage is not distinguished between students in Islamic and other academic disciplines.

Significant relationships exist between performance expectations and students' behavioral intentions to use YouTube for Islamic information acquisition, supporting H1 as anticipated. The path coefficients did not vary significantly between the Islamic academic discipline and other academic discipline groups of students. The easy access to YouTube among students might explain that video on Islamic material is available anywhere, anytime, on various devices. Hence, this result aligns with earlier studies that used UTAUT in YouTube research contexts for information acquisition [23].

Parallel to the hypothesized relationship, effort expectancy affects students' use of YouTube for Islamic Information acquisition for both groups in different academic disciplines. Thus, H2 is upheld. This result has also been a decisive factor in the intention to use social media for learning in previous studies [47-49]. For this study, it may be assumed that the students' use of YouTube for Islamic learning does not necessitate any intellectual, physical, emotional, or psychological effort on their part. In other words, YouTube apps are simple to use for information acquisition.

Regarding social influence on behavioural intention to use YouTube for Islamic information, this research's findings portrayed that students do emphasize this, and hence H3 is supported. This research's results are consistent with previous studies in UTAUT, which explain that social influence factors are closely related to a person's behavioral intentions to use YouTube [23][47-50]. Furthermore, the effect of social influences on the YouTube use intention was greater for students in Islamic discipline than for other academic disciplines. This interesting result might come from an increased number of Muslim preachers utilizing YouTube to spread their message [62, 63]. This study, even so, found that the difference in path coefficients between the two groups was insignificant.

The existence of facilitating conditions positively affects students' actual usage of YouTube for Islamic Information overall and other academic disciplines students. Hence, H4 was sustained. However, it was not a determinant for Islamic academic disciplines students. This predictor's path coefficients on YouTube usage appeared to be higher among other academic disciplines students. Nonetheless, in this study, there were no significant differences in the path coefficients of the two groups. This finding is both enlightening and controversial. The explanation for this might be due to the enabling condition's limited effect size on other academic disciplines of student usage. Furthermore, there were no variations in the effect size of the facilitating conditions among the two groups. The result is along the lines of earlier literature [23] that found that facilitating condition was not a predictor of students' willingness to use YouTube application for learning.

Unlikely, the behavioral intention was not significantly related to the YouTube usage for either Islamic or other academic discipline students; there was no substantial difference between the two groups. This intriguing outcome might be since using YouTube to obtain Islamic material is a voluntary use of technology. However, several research that deemed social media use for learning to be mandatory disputed these findings [23][47].

This research presents a statistically verified UTAUT model to explain the different usage between students of Islamic and other academic disciplines. In the context of disseminating Islamic information on online platforms, this study corroborates the UTAUT's ability to predict students' behavioral intentions regardless of their academic background. The students of nowadays are known as 'digital natives,' who are accustomed to incorporating technology into every aspect of their lives, including religious activities. They exploited YouTube as a search engine to discover information in formal and informal learning [8]. However, previous research discovered obstacles to misinformation and disinformation of Islamic information on social media [20]. Given these results, Muslim preachers should utilize this platform to disseminate Islamic information as the video's credibility depends on them. Furthermore, YouTube potentially encourages interactivity among users and preachers because it has tools that facilitate interaction.

Finally, this study has limitations that may suggest future research directions. First, possible latent variables that may enhance the prediction of students' behavioral intentions, such as ambiguity of information [64] and students' religiosity, should be considered in future research. Second, the study examined just Malaysian students; results obtained in other countries may differ. Lastly, this research depended on respondents' self-reported measures of actual usage, which might be skewed by common method bias. Assessing students' usage in a longitudinal study and controlling for real YouTube usage would be a more precise estimate.

#### VI. CONCLUSION

This research's primary goal was to observe the factors influencing students' behavior when it comes to YouTube usage for Islamic information acquisition established on the UTAUT research framework. This research also analyzes the differences between Islamic academic disciplines and other academic disciplines groups of students in the usage of YouTube for Islamic information acquisition. The findings imply that for both groups, students' behavioral intentions to YouTube for these specific purposes are predicted by social influences, effort expectancy, and performance expectancy. The results also found that that facilitating conditions were not a significant predictor of Islamic academic disciplines students' actual YouTube usage. Nonetheless, for both groups, behavioral intention was not a substantial predictor of actual YouTube usage for Islamic information acquisition. Overall, results of the multi-group analysis of PLS-SEM showed that there were no substantial differences were observed in any path coefficient between the two groups. The research's theoretical contribution is to verify the UTAUT model in the usage of YouTube among students in higher education for specific information acquisition.

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APPENDIX	А

Constructs	Items			
	PE1	I would find YouTube useful for me to acquire Islamic information.		
	PE2	Using YouTube increases my daily religious practice.		
Performance Expectancy	PE3	Using YouTube enables me to understand Islamic knowledge more quickly.		
	PE4	Using YouTube increases my religious faith.		
	PE5	Using YouTube enables me to solve uncertainty in Islamic information.		
	EE1	Learning to operate YouTube for Islamic information acquisition is easy for me.		
	EE2	My interaction with YouTube on Islamic information acquisition would be clear and understandable.		
Effort Expectancy	EE3	I would find YouTube easy to use for religious purposes.		
	EE4	It would be easy for me to become skillful at using YouTube to find Islamic information.		
	EE5	I would find YouTube easy to use for Islamic information acquisition.		
	SI1	People who are important to me think I should use YouTube for Islamic information acquisition.		
Social Influence	SI2	People who influence my behavior think I should use YouTube for Islamic information acquisition.		
	SI3	My peers have been helpful in using YouTube for Islamic information acquisition.		
	SI4	In general, most people have supported using YouTube for Islamic information acquisition.		
	FC1	I have the resources necessary to use YouTube.		
	FC2	It would be comfortable for me to surf YouTube for Islamic information acquisition.		
Facilitating Conditions	FC3	I have the knowledge necessary to use YouTube.		
	FC4	YouTube is compatible with any gadgets I use.		
	FC5	A specific person is available for assistance with the YouTube difficulties.		
	BI1	I plan to use YouTube for Islamic information acquisition soon.		
Daharai and Internetion	BI2	I predict I would use YouTube every day for religious benefit.		
Benavioral Intention	BI3	I intend to use YouTube more often to acquire Islamic information.		
	BI4	I want to share Islamic information on YouTube with my friends.		
Actual Usage	Using YouTube for religious information on my own initiatives.			